

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: June 19, 1997
Date Received: June 16, 1997
Project: Metro Grab, PO #M57538
Date Samples Extracted: June 17, 1997
Date Extracts Analyzed: June 18, 1997

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE
FOR CHROMIUM, COPPER, NICKEL, AND ZINC
USING METHOD 6010**

Samples Processed Using Method 3005A
Results Reported as mg/L (ppm)

<u>Sample ID</u>	<u>Chromium</u>	<u>Copper</u>	<u>Nickel</u>	<u>Zinc</u>
M57538	0.47	0.35	0.64	<0.05
Method Blank	<0.05	<0.05	<0.05	<0.05

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**QUALITY ASSURANCE RESULTS FOR
 THE ANALYSIS OF WATER SAMPLES
 FOR TOTAL METALS BY
 INDUCTIVELY COUPLED PLASMA (ICP)
 (METHOD 6010)**

Laboratory Code: 78777 (Duplicate)

Analyte:	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	mg/L (ppm)	0.47	0.46	2	0-20
Copper	mg/L (ppm)	0.35	0.33	6	0-20
Nickel	mg/L (ppm)	0.64	0.61	5	0-20
Zinc	mg/L (ppm)	<0.05	<0.05	nm	0-20

Laboratory Code: 78777 (Matrix Spike)

Analyte:	Reporting Units	Spike Level	Sample Result	% Recovery MS	MSD	Acceptance Criteria	Relative Percent Difference
Chromium	mg/L (ppm)	5	0.47	85	86	80-120	1
Copper	mg/L (ppm)	5	0.35	86	83	80-120	4
Nickel	mg/L (ppm)	10	0.64	86	87	80-120	1
Zinc	mg/L (ppm)	5	<0.05	86	86	80-120	0

Laboratory Code: Spike Blank

Analyte:	Reporting Units	Spike Level	% Recovery MS	MSD	Acceptance Criteria	Relative Percent Difference
Chromium	mg/L (ppm)	5	88	93	80-120	6
Copper	mg/L (ppm)	5	86	93	80-120	8
Nickel	mg/L (ppm)	10	91	95	80-120	4
Zinc	mg/L (ppm)	5	91	93	80-120	2

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Beth Albertson, M.S.
Charlene Jensen, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.
Melanie Kirol, B.S.
June 19, 1997

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

**INVOICE # 97ACU0619-1
DUPLICATE COPY**

Accounts Payable
Alaskan Copper Works
628 South Hanford
Seattle, WA 98134

RE: Project Metro Grab, PO #M57538: Results of testing requested by Gerry Thompson, Project Manager for material submitted on June 16, 1997.

1 water sample analyzed for
Chromium, Copper, Nickel, Zinc
using Method 6010 @ \$65.00 per sample

\$ 65.00

Amount Due

\$ 65.00

FEDERAL TAX ID #

(b) (6)

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June 19, 1997

**Gerry Thompson, Project Manager
Alaskan Copper Works
628 South Hanford
Seattle, WA 98134**

Dear Mr. Thompson:

**Included are the results from the testing of material submitted on June 16, 1997
from your Metro Grab, PO #M57538 project.**

**We appreciate this opportunity to be of service to you and hope you will call if you
should have any questions.**

Sincerely,

FRIEDMAN & BRUYA, INC.

A handwritten signature in black ink, appearing to read 'Kurt Johnson', with a stylized flourish at the end.

**Kurt Johnson
Chemist**

**keh
Enclosures
ACU0619R.DOC**